

07.27.06

COM. NEW. (FULL)

BUILDING

PERMIT

06.3529

001113

07-20-302-081

**COMN - COMMERCIAL NEW CONSTRUCTION - APPLICATION FORM**
☐ Completed Project resulting in a Certificate of Occupancy **(OR)** ☐ White envelope for Future Tenant

FOR OFFICIAL USE ONLY

TOTAL FEE

PERMIT APPLICATION NO.

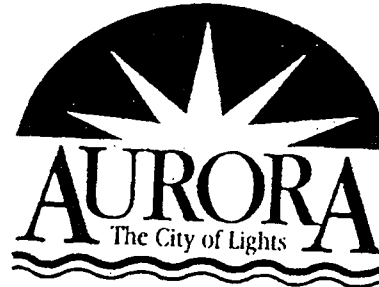
06-3529

SUBMITTED 7/27/06

NOTIFIED 11/11/07

ZONING

 BLDG 506.00  
 PLRV 51.00  
 C.O. (✓ above) 70  
 F.I.F. 1088.00  
 WTR 1144.00

 WEB www.CI.AURORA.IL.US  
 FAX (630) 892-8112  
 TELEPHONE (630) 892-8088

 DIVISION OF BUILDING & PERMITS  
 65 WATER STREET  
 AURORA, ILLINOIS 60505

06-3529. C-BU

240 N OAKHURST DR

GEMINI OFFICE  
GEMINI OFFICE DEVELOPMENT**LAND / PARCEL INFORMATION**

PROPERTY

ADDRESS OAKHURST & NEW YORKSUBDIVISION FOX VALLEY EAST UNIT/PHASE # 52 OAKHURST LOT # 2
 COUNTY ☐ KANE ☒ DuPAGE TOWNSHIP 11 12 04 TOWNSHIP SECTION #  
 (CHECK ONE) ☐ KENDALL ☐ WILL (CIRCLE ONE) 14 15 07 If project involves new construction in DuPage County - Impact Tax must be Paid  
 (Call tax assessor's office with questions) 03 01 BLOCK # (if known) LOT# (if known)

PROPERTY OWNER &amp; GEMINI OFFICE DEVELOPMENT

Contact Name THOMAS LEHMAN

TENANT &amp; GEMINI OFFICE DEVELOPMENT

Contact Name DARIUS PETRASHOWNER'S ADDRESS 6301 S. CASS AVE. STE 301WESTMONT, IL 60559PHONE # (630) 963-8184FAX # (630) 963-9975E-MAIL TWLEHMAN@AMELITELH.NETADDRESS ONE SOUTH WALKER DR. STE 800CHICAGO, IL 60606PHONE # (312) 302-0630FAX # (312) 634-5525

E-MAIL

**ZONING INFORMATION**
 Zoning (CHECK ONE) ☐ R-1 ☐ R-2 ☐ R-3 ☐ PDD  
 Classification ☐ R-4 ☐ R-4A ☐ R-5 ☐ R-5A  
☐ B-1 ☐ B-2 ☐ B-3 ☐ B-B  
☐ SPECIAL USE ☐ M-1 ☐ M-2  
 (CHECK IF APPLICABLE) ☐ O ☐ ORI ☐ RD ☒ PDD  
☐ DC ☐ DF C.O.A. Required
**OCCUPANCY CLASSIFICATION**

Existing Use / Occupancy

Proposed Use / Occupancy B- BUSINESS
☐ Single Occupancy (302.1)  
☐ w/ Incidental use (302.1.1)  
☐ w/ Accessory use (302.2)  
 < 10% of area & < allowable for Acc.  
☐ Mixed Occupancy (302.3)  
☐ non-separated  
☐ separated attach sum of ratios  
 calculation per section (504)

Check all Occupancy Classifications that apply below.

 Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5  
 Business, Education, Factory ☒ B ☐ E ☐ F-1 ☐ F-2  
 Hazardous ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5  
 Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4 ☐ I-5  
 Mercantile, Residential ☐ M ☐ R-1 ☐ R-2  
 Storage, Utility ☐ S-1 ☐ S-2 ☐ U
**FLOOD ZONE INFORMATION**

IS YOUR PROPERTY IN A FLOOD PRONE AREA?

☒ No ☐ Yes Verify with COA Engineering (630) 844-3620**GENERAL DESCRIPTION OF PROPOSED WORK**MEDICAL OFFICE BUILDINGTOTAL COST OF IMPROVEMENTS \$ 4,000,000.00

COMN - Permit Application

Page 1 of 3

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Address \_\_\_\_\_

Application # \_\_\_\_\_

CONSTRUCTION TYPE		BUILDING INFORMATION	
EXISTING	CIRCLE ONE 1 2 3 4 5 A B	ALLOWABLE TABULAR AREA (503)	23,000 s.f. 100 %
NEW	1 2 3 4 5 A B	INCREASE FOR FRONTAGE (506.2)	+ 17,250 s.f. + %
Sprinklers	<input type="checkbox"/> none <input type="checkbox"/> limited <input checked="" type="checkbox"/> complete	INCREASE FOR SPRINKLERS (506.3)	+ 69,000 s.f. + %
Fire Alarm	<input type="checkbox"/> no <input checked="" type="checkbox"/> yes	TOTAL ALLOWABLE AREA PER FLOOR	109,250 s.f. %
Unlimited Area	<input type="checkbox"/> no <input type="checkbox"/> yes	ACTUAL MAX. TOTAL AREA PER FLOOR	21,777 s.f.
Occupants per s.f.	100	TOTAL ALLOWABLE AREA ALL STORIES	[allowable s.f. / flr.] x [# stories (3max)] = 109,250 s.f.
Occupancy load	218	ACTUAL AREA ALL STORIES	21,777 s.f.
		ACTUAL BUILDING HEIGHT	24 FT
		ALLOWABLE HEIGHT	55 FT
		ACTUAL NUMBER OF STORIES	1
		ALLOWABLE # OF STORIES	4

BUILDING AREA	
[FOR NEW AREA - PERMIT FEES ARE A FUNCTION OF SQUARE FOOTAGE]	
SF PRINCIPAL	21,777 SF
SF MEZZANINE	SF
SF BASEMENT / CRAWL	SF
TOTAL	21,777 SF

ELECTRICAL INFORMATION	
ELECTRICAL WORK ?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
ELECTRIC SERVICE SIZE	100 AMPS 1 SET GENERAL
# OF SETS OF SERVICE CONDUCTORS	2 SETS
SIZES OF SERVICE CONDUCTORS	1 SET OF 4 #500 2 SETS OF 4 #350
# OF ELECTRIC METERS	2 SERVICE VOLTAGE 277/480 4 #350
FIRE PUMP SIZE	FIRE PUMP VOLTAGE

PLUMBING INFORMATION	
PLUMBING WORK ?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
DOMESTIC WATER SERVICE SIZE	3" φ
OCCUPANT LOAD PER ILLINOIS PLUMB'G CODE	109
PLUMBING FIXTURE UNITS	209 CW 59 HW 3/3 WASTE
TYPE OF BACKFLOW PROTECTION DEVICE	R.P.Z.

Fox Metro W.R.D. needs a submittal

MECHANICAL INFORMATION	
MECHANICAL WORK ?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
TYPE HVAC	<input checked="" type="checkbox"/> RTU <input type="checkbox"/> SPLIT SYST <input type="checkbox"/> UNIT HTRS
# BTU'S	689,000 <input checked="" type="checkbox"/> A/C <input type="checkbox"/> BOILER <input type="checkbox"/> EXHAUST
KITCHEN HOOD	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES EXHAUST HOOD <input type="checkbox"/> NO <input type="checkbox"/> YES

FIRE PREVENTION INFORMATION	
SUPPRESSION SYST. WORK ?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES
FIRE WATER SERVICE SIZE	4" φ
TYPE OF BACKFLOW PROTECTION DEVICE	DCDV
FIRE PUMP ?	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
STANDPIPES ?	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
Exhaust HOOD SUPPRESSION ?	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
FIRE ALARM SYST. WORK ?	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES

## DETAILED DESCRIPTION OF CONSTRUCTION WORK

THERE ARE TWO (2) ELECTRICAL SERVICES FOR THIS PROJECT.  
 (1) FOR GENERAL, (1) FOR ELECTRIC HEAT.

## DESIGN PROFESSIONALS IN RESPONSIBLE CHARGE -- PER IBC 106

LICENSED ARCHITECT / STRUCTURAL ENGINEER	CIVIL ENGINEER / PROFESSIONAL ENGINEER
ILLINOIS PROFESSIONAL (Check primary contact) <input checked="" type="checkbox"/>	(Check if primary contact) <input type="checkbox"/>
DESIGN FIRM REG. # 184-000279	
BUSINESS NAME JENSEN & HALITEAD LTD.	BUSINESS NAME MORRIS ENGINEERING
CONTACT NAME DAVID DASTUR	CONTACT NAME JONAS VAZNELIS
ADDRESS 358 WEST ONTARIO ST.	ADDRESS 5100 SOUTH LINCOLN
CITY, STATE ZIP CHICAGO, IL 60610	CITY, STATE ZIP LITTLE, IL 60532
PHONE (312) 664-7557	PHONE (630) 271-0770
FAX (312) 664-7558	FAX (630) 271-0774
E-MAIL DDASTUR@JENSENANDHALITEAD.COM	E-MAIL JONVAZNELIS@CIVIL.COM

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, COMPLY WITH ALL CODES.

ARCH or STRUCT or (P.E. for Mech. Elect. Plumb.)

(SIGNATURE)



COMN - Permit Application

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06-3529

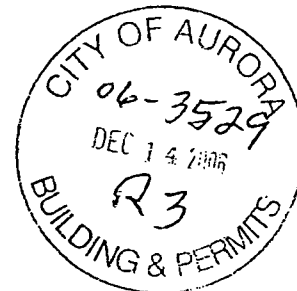


**Gehrett Plumbing, Inc.**  
PIPING CONTRACTORS



4743 S. Knox Ave.  
Chicago, IL 60632  
Tel: (773) 284-1141  
Fax: (773) 284-0361

December 11, 2006



City of Aurora  
Department of Building and Permits  
65 Water Street  
Aurora, Illinois 60506-5177

**06.-3529. C-BU**

240 N OAKHURST DR  
GEMINI OFFICE  
GEMINI OFFICE DEVELOPMENT

Gentlemen:

We have been employed by Krah Construction Company  
To install the plumbing work at Gemini Outpatient Facility, 240 North  
Oakhurst Drive, Aurora, Illinois.

Our Corporate Seal is attached to this letter.

Sincerely,

*Francis C. Kennedy*  
Francis C. Kennedy  
President


FCK:pt

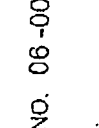
001116

From: 8157237243

Page: 2/2

Date: 12/7/2006 6:33:58 AM

 <b>City of Aurora</b> 65 Water Street Aurora, IL 60507	<b>ELEC(COM) CONTRACTOR MUNICIPAL LICENSE</b> Keep Posted in Public View	NO. 06 -00003600
<small>Under the Municipal Code of the City of Aurora, this certificate when properly validated affirms that the appropriate License Fee, or other indicated fee, has been paid.</small>		
<b>FEE</b> \$ 100.00	<b>ACCOUNT NO.</b> 21-0604	<b>VALID TO</b> 12/01/07
<b>VALID FROM</b> 12/01/06	<b>VALIDATION STAMP</b> <i>Cheryl M. Vanhoff</i>	
<b>TIMM ELECTRIC, INC.</b> 17832 MILLS RD JOLIET IL 60433 BOND EXPIRES 11/27/07		

 <p>City of Aurora 65 Water Street Aurora, IL 60507</p>	<p>HEATING CONTRACTOR MUNICIPAL LICENSE Keep Posted in Public View</p>	<p>NO. 06 -00014029</p>
<p><small>Under the Municipal Code of the City of Aurora, this certificate when properly validated affirms that the appropriate License Fee, or other indicated fee, has been paid.</small></p>		
<p>FEE \$ 100.00</p>	<p>ACCOUNT NO. 21-0603</p>	<p>VALID TO 12/14/07</p>
<p>STATE MECHANICAL SERVICES 1707 QUINCY AV #141 NAPERVILLE IL 60540</p>	<p>VALID FROM 12/14/06</p>	<p>AURORA TESTED 12/2006 BOND EXPIRES 11/01/07</p>
<p><i>Cheryl M. Donhoff</i> VALIDATION STAMP</p>		

0001/001

12/15/2006 FRI 10:12 FAX 630 892 8112 COA BLDGS\FIRE PREV.

811100

From: 17732840361 Page: 1/5 Date: 12/19/2006 4:20:09 PM



**Gehrett Plumbing, Inc.**  
PIPING CONTRACTORS



4743 S. Knox Ave.  
Chicago, IL 60632  
Tel: (773) 284-1141  
Fax: (773) 284-0361

FACSIMILE TRANSMITTAL COVER SHEET

**06.-3529. C-BU**

240 N OAKHURST DR  
GEMINI OFFICE  
GEMINI OFFICE DEVELOPMENT

**RS**

DATE: December 19, 2006

COMPANY: Krah Construction  
TO: Scott

FROM: Mike Caputo/Pat Thorstad

RE: Contractors Registration Aurora

FAX: 312-707-8552  
TIME SENT: 4:20 pm

# OF PAGES (INCLUDING THIS PAGE): 5

MESSAGE:  
Scott,

Attached is a copy of the information I sent to City of Aurora. The Letter of Intent has our Corporate Seal on the original, this is a copy only. If you have any questions please call me.

Thanks,

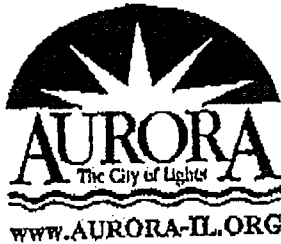
Pat Thorstad

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMISSION, PLEASE  
CALL 773-284-1141 IMMEDIATELY:

From: 17732840361 Page: 2/5 Date: 12/19/2006 4:20:09 PM

12/08/2006 FRI 18:07 FAX 630 892 8112 COA BLDGS\FIRE PREV.

001/001



## CONTRACTOR REGISTRATION

Division of Building and Permits 65 Water Street Aurora IL 60505 Ph: (630) 892-8088 Fx: (630) 892-8112	Fire Prevention Bureau 65 Water Street Aurora IL 60505 Ph: (630) 892-9001 Fx: (630) 892-8112
Plumber_____	Sprinkler_____ Fire Alarm_____ Alternate Suppression_____

Select only one contractor type per Registration

PLEASE TYPE OR PRINT

DATE 12/11/2006

BUSINESS NAME Gehrett Plumbing, Inc.

APPLICANT NAME Frank Kennedy

(PLEASE PRINT)  
MAILING ADDRESS 4743 South Knox Chicago, Illinois 60632  
STREET CITY/STATE ZIP

BUSINESS TELEPHONE 773-284-1141

BUSINESS FAX 773-284-0631

SIGNATURE Frank Kennedy, President  
*Frank Kennedy*

- Copy of license card with photo identification.
- Copy of State of Illinois Certificate of Registration.
- Legible Faxes are acceptable, (note that photos are frequently not legible via fax.)

## Plumbers:

If you do not have a Certificate of Registration; please notify the Illinois Department Of Public Health at (217) 524-0791.

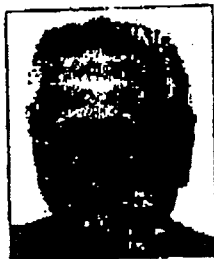
## Fire alarm, Sprinkler and Alternate suppression:

• Illinois Department of Professional Registration (217) 785-0800  
• Office of the State Fire Marshal (217) 785-1520  
• Provide copy of proof of Insurance

C:\Documents and Settings\Wig\Local Settings\Temporary Internet Files\OLK1\Fire\_Plumbing CONTRACTOR  
REGISTRATION.doc



From: 17732840361 Page: 3/5 Date: 12/19/2006 4:20:09 PM



City of Chicago  
Department of Buildings  
Plumber Contractor's License  
Issued : 03/30/2006  
**FRANCIS C. KENNEDY**  
License # : PL10249  
Expires : 04/30/2007

This license is valid and in force throughout the State of Illinois and the City of Chicago in accordance with an act of the 68th General Assembly

The licensee shall continue to be a member of the International Brotherhood of Plumbers and Pipe Fitters, Local Union No. 10249, and shall maintain his membership in good standing.


**Richard M. Daley**  
Mayor, City of Chicago  
**John E. Knight**  
Commissioner,  
Department of Buildings  
**Andrew L. Tomlin**  
Director of Licensing & Registration



**BOARD OF PLUMBING EXAMINERS**  
**Robert E. Ryan** **Francis C. Kennedy**

This is to certify that the above named person is a duly licensed plumber and pipe fitter in the City of Chicago, and is qualified to perform the duties of a plumber and pipe fitter in accordance with the rules and regulations of the Department of Buildings, City of Chicago, Illinois.

From: 17732840361 Page: 4/5 Date: 12/19/2006 4:20:09 PM

 <b>State of Illinois 1742982</b> <b>Department of Public Health</b>		
<b>LICENSE, PERMIT, CERTIFICATION, REGISTRATION</b>		
<p>The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.</p>		
<b>ERIC R. WHITAKER, M.D.</b> <b>DIRECTOR</b>		Issued under the authority of The State of Illinois Department of Public Health
EXPIRATION DATE <b>09-30-2007</b>	CATEGORY <b>055</b>	I.D. NUMBER <b>055-000178</b>
<b>GEHRETT PLUMBING, INC.</b> <b>PLUMBING CONTRACTOR</b> <b>REGISTRATION</b>		
BUSINESS ADDRESS <b>** THIS IS NOT TRANSFERRABLE **</b>		
<b>GEHRETT PLUMBING, INC.</b> <b>4743 SOUTH KNOX AVENUE</b> <b>CHICAGO IL 60632</b> <b>08 COOK</b>		
The face of this license has a colored background. Printed by Authority of the State of Illinois - 4/97 -		

GEHRETT PLUMBING, INC.  
 4743 SOUTH KNOX  
 CHICAGO, ILLINOIS 60632  
 773-284-1141  
 773-284-0361 (F)

From: 17732840361 Page: 5/5 Date: 12/19/2006 4:20:09 PM



**Gehrett Plumbing, Inc.**  
PIPING CONTRACTORS



4743 S. Knox Ave.  
Chicago, IL 60632  
Tel: (773) 284-1141  
Fax: (773) 284-0361

December 11, 2006

City of Aurora  
Department of Building and Permits  
65 Water Street  
Aurora, Illinois 60506-5177

Gentlemen:

We have been employed by Krah! Construction Company  
To install the plumbing work at Gemini Outpatient Facility, 240 North  
Oakhurst Drive, Aurora, Illinois.

Our Corporate Seal is attached to this letter.

Sincerely,

*Francis C. Kennedy*  
Francis C. Kennedy  
President

FCK:pt

12/21/06

TO: DAN

**06.-3529. C-BU**

4:45pm

240 N OAKHURST DR  
GEMINI OFFICE  
GEMINI OFFICE DEVELOPMENT

R5

PERMIT #

06 - 00003529

ADDRESS OF JOB 240 N OAKHURST

CONTACT NAME Scott Mouser

PHONE #

312 - 735 - 6397

SUBMITTING 2 SETS OF REVISED  
PLANS FOR FOLLOWING TRADES:

2 SETS OF STAMPED PRECAST DRAWINGS

1 COPY ELECTRICIAN LICENSE FOR AURORA (TIMM ELECTRIC)

1 COPY MECHANICAL LICENSE FOR AURORA (STATE MECHANICAL)

1 COPY PLUMBER LICENSE FOR AURORA (GETRETT PLUMBING)

AS REQUESTED IN YOUR PLAN REVIEW

PERMIT

06-3529

Check if Req'd	Trade	Inspection Type	Code	Description and Timing
<input checked="" type="checkbox"/>	Elect.	Electrical underground	EUG	After under slab electrical installation and prior to concealment.
<input checked="" type="checkbox"/>	Elect.	Electrical service	ELES	After installation and after backfill of foundation
<input checked="" type="checkbox"/>	Elect.	ComEd notified	UTIL	Concurrent with Electrical Service
<input checked="" type="checkbox"/>	Elect.	Electrical rough	ERGH	After completing conduit, wiring and boxes prior to insulation or wall/ceiling finish.
<input checked="" type="checkbox"/>	Elect.	Above ceiling electric rough	EABC	Just prior to placing ceiling tile. Verification of above ceiling items
<input type="checkbox"/>	Elect.	Pre-stock before Final	PSKE	Prior to permission to stock. All life safety items shall be in place and approved.
<input type="checkbox"/>	Elect.	Residential Electrical final	REFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.
<input checked="" type="checkbox"/>	Elect.	Commercial Electrical final	EFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.

001125

## PERMIT

6-3529

Check if  
Req'd

	Trade	Inspection Type	Code	Description and Timing
<input type="checkbox"/>	HVAC	Mechanical underground	MUG	After under slab HVAC or Gas piping installation and prior to concealment.
<input checked="" type="checkbox"/>	HVAC	Mechanical rough	MRGH	After completing mechanical system and gas piping prior to insulation or wall/ceiling finish.
<input checked="" type="checkbox"/>	HVAC	Above ceiling HVAC rough	MABC	Just prior to placing ceiling tile. Verification of above ceiling items
<input type="checkbox"/>	HVAC	Pre-stock before Final	PSKM	Prior to permission to stock. All life safety items shall be in place and approved.
<input type="checkbox"/>	HVAC	Residential Mechanical final	RMFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.
<input checked="" type="checkbox"/>	HVAC	Commercial Mechanical final	MFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.

001126

**06.-3529. C-BU**

240 N OAKHURST DR

GEMINI OFFICE

GEMINI OFFICE DEVELOPMENT

PERMIT

Check if  
Req'd Trade Inspection Type Code Description and Timing

<input checked="" type="checkbox"/>	Plmbg	Plumbing underground	PUG	After under slab Plumbing installation and prior to concealment.
<input checked="" type="checkbox"/>	Plmbg	Plumbing Rough / Aby Ceiling	PRGH	After completing sanitary, storm and supply piping prior to insulation or wall/ceiling finish.
<input checked="" type="checkbox"/>	Plmbg	Pre-stock before Final	PSKP	Prior to permission to stock. All life safety items shall be in place and approved.
<input type="checkbox"/>	Plmbg	Residential Plumbing final	RPFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.
<input checked="" type="checkbox"/>	Plmbg	Commercial Plumbing final	PFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.

001127

## PERMIT

6-3529

Check if Req'd	Trade	Inspection Type	Code	Description and Timing
<input checked="" type="checkbox"/>	Bldg.	Pre-stock before Final	PSTK	Prior to permission to stock. All life safety items shall be in place and approved.
<input checked="" type="checkbox"/>	Bldg.	Conc. Footing / Int. Piers	FTN	After excavation and placement of forms / reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Conc. Trench	TRCH	After excavation and placement of reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Foundation Rebar	WSTL	After placement of reinforcing steel and prior to concealment.
<input type="checkbox"/>	Bldg.	Post Holes for Decks etc.	POST	After excavation and placement of forms / reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Conc. Foundation	FND	After excavation and placement of forms / reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Conc. Cap wall	CAP	After excavation and placement of forms / reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Grade Beam	GRBM	After excavation and placement of forms / reinforcing steel if any, and prior to concealment.
<input type="checkbox"/>	Bldg.	Backfill / Foundation wall	BACK	After waterproofing and drain tile, before backfill.
<input checked="" type="checkbox"/>	Bldg.	Framing rough	FRGH	After roof is completed and other trade roughs are completed, prior to insulation or wall/ceiling finish.
<input checked="" type="checkbox"/>	Bldg.	Above ceiling framing rough	BABC	Just prior to placing ceiling tile. Verification of firestopping and above ceiling structure
<input checked="" type="checkbox"/>	Bldg.	Commercial Building Final	BFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.
<input type="checkbox"/>	Bldg.	Residential Building Final	RBFN	After all work is completed. All work must pass Final Inspection before a Certificate of Occupancy can be issued.

C01128



**06.-3529. C-BU**

**240 N OAKHURST DR**

**GEMINI OFFICE**

**GEMINI OFFICE DEVELOPMENT**

**GEOTECHNICAL ENGINEERING  
SERVICES REPORT**

**Proposed Medical Office Building  
Oakhurst Drive - Lot 2  
Aurora, Illinois**

**PSI File No. 042-55077**

**December 19, 2005**

**psi** *Information  
To Build On*  
Engineering • Consulting • Testing

**001129**



December 19, 2005

Mr. Thomas W. Lehman, PE  
Managing Principal  
Partners in Development, USA, LLC  
6301 S. Cass Avenue, Suite 301  
Westmont, Illinois 60559

(630) 963-8184  
(630) 963-4475 fax

Re: Preliminary Geotechnical Engineering Services Report  
Proposed Office Development  
"Lot 2" - Oakhurst Drive  
Aurora, Illinois PSI Project No. 042-55077

Dear Mr. Lehman,

Professional Service Industries, Inc. (PSI) is pleased to submit our Preliminary Geotechnical Engineering Services Report for the proposed office development in Aurora, Illinois. This preliminary report includes the results of field and laboratory testing, preliminary recommendations for foundation, as well as preliminary recommendations for general site development.

PSI appreciates the opportunity to perform this Preliminary Geotechnical Evaluation and we look forward to continued participation during the design and construction phases of this project. If you have questions pertaining to this preliminary report, or if PSI may be of further service, please contact our office at (847) 931-7110.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

A handwritten signature in black ink, appearing to read "Scott Brown".

Scott Brown, EI  
Project Engineer

A handwritten signature in black ink, appearing to read "John J. Balun".  
John J. Balun  
Branch ManagerA circular professional engineer seal for the State of Illinois. The seal contains the text "PROFESSIONAL ENGINEER", "STATE OF ILLINOIS", and "12/19/05". The name "KEVIN C. MILLER" is stamped across the seal, along with "062-049089" and "Expires 12/30/07".

Kevin C. Miller, P.E.  
Chief Engineer  
IL License No. 062-049089  
Expires 12/30/07  
SDB/jjb/ Encl

# PRELIMINARY GEOTECHNICAL ENGINEERING SERVICES REPORT

PROPOSED OFFICE DEVELOPMENT  
LOT 2 OAKHURST DRIVE  
OAKHURST DRIVE JUST SOUTH OF E. NEW YORK STREET  
AURORA, ILLINOIS

PSI PROJECT NO. 042-55077

PREPARED FOR

PARNTERS IN DEVELOPMENT, USA. LLC  
6301 S. CLASS AVENUE, SUITE 301  
WESTMONT, ILLINOIS

DECEMBER 19, 2005

BY

PROFESSIONAL SERVICE INDUSTRIES, INC.

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## PROJECT INFORMATION

### Project Authorization

Professional Service Industries, Inc. (PSI) has completed a preliminary geotechnical exploration for the proposed office development on Oakhurst Drive in Aurora, Illinois. Mr. Thomas W. Lehman with Partners in Development, USA, LLC authorized PSI's services by signing PSI Proposal No. 042-550126 faxed to PSI on December 5, 2005.

### Project Description

PSI understands that Gemini Office Development, LLC is considering purchase of a parcel of land designated as "Lot 2" in Aurora, Illinois for the purpose of constructing a medical office building without a basement. This report is based on the building being a single-story, slab-on-grade structure, approximately 22,000 square feet in plan area. The building will be constructed toward the center portion of the site.

Mr. Thomas Lehman of Partners in Development USA, LLC provided PSI with project information through an email on November 28, 2005. PSI has received an untitled drawing showing a survey of Lot 2. The drawing is copyrighted 2005 Cemcon, Ltd.

Structural loads were not provided to PSI; however, this report is based on individual column and bearing wall loads not exceeding 75 kips and 3 kips per linear foot, respectively. This report is also based on floor slab live loads not exceeding 150 psf.

The geotechnical recommendations presented in this report are based on the available project information, building location, and the subsurface materials described in this report. If any of the noted information is incorrect, please inform PSI in writing so that we may amend the recommendations presented in this report (if appropriate, and if desired by the client). PSI will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

### Purpose/Scope of Services

The purpose of this preliminary study was to explore the subsurface conditions at the site in order to prepare preliminary recommendations for shallow foundation for the proposed office development. PSI's scope of services included drilling a total of six (6) soil borings to a depth of approximately 20 feet below the existing ground surface.

Representative soil samples obtained during the field exploration program were transported to the laboratory for classification testing. This preliminary report briefly outlines the following:

- Available project information
- Site topographic information and surface conditions
- Review of subsurface conditions
- Review of field and laboratory test procedures and test data
- Generalized earthwork considerations, including suitability for re-use of excavated material as fill, and preliminary recommendations for subgrade preparation and site grading
- Preliminary suitability of the site for:
  - Shallow foundations, including a range of allowable bearing pressure(s), and a range of estimated settlement
  - Slab-on-grade floors
- Generalized discussion of construction considerations, including temporary excavation and construction control of water
- Recommendations for the final Geotechnical Investigation and final Geotechnical Report

The scope of services did not include an environmental assessment to determine the presence or absence of wetlands, or hazardous or toxic materials in the soil, bedrock, surface water, groundwater or air, on, or below or around this site. Any statements in this report and/or on the boring logs regarding odors, colors, and/or unusual or suspicious items or conditions are strictly for informational purposes.

PSI's scope of services did not include any service to investigate or detect the presence of moisture, mold or other biological contaminants in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence of the amplification of the same. Mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Site conditions are outside of PSI's control, and mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

### SITE AND SUBSURFACE CONDITIONS

#### Site Location and Description

The site is located on the west side of Oakhurst Drive just south of New York Street in Aurora, Illinois and is currently a vacant lot with some vegetation. A detention pond is located directly to the west of the site. The site was generally level with a visually estimated difference in elevation of approximately 2 to 3 feet. The site has an approximate latitude and longitude of 41N 45' 27" and 88W 14' 21", respectively.

#### Subsurface Conditions

Partners in Development, USA, LLC selected the number of borings and boring depths. PSI located the borings in the field by measuring distances from known fixed site features. The borings were advanced utilizing 2 1/4" inside-diameter, hollow stem auger drilling methods and

soil samples were routinely obtained during the drilling process. Select soil samples were tested in the laboratory to determine material properties for our evaluation. Drilling, sampling, and laboratory tests were accomplished in general accordance with ASTM procedures.

Subsurface conditions generally consisted of approximately 6 to 12 inches of clayey topsoil followed by undocumented silty clay fill materials to approximately 3 to 7 ½ feet below the existing grade. The fill materials were generally underlain by medium stiff to very stiff silty clay with trace sand and gravel to the borings' termination depth of approximately 20 feet below existing grade. The fill materials were likely placed during site grading for the adjacent retail development. Field and laboratory test results are summarized in the following table:

SOIL TYPE	DEPTH RANGE (FEET)	SPT N-VALUES (BLOWS PER FOOT)	MOISTURE CONTENT (%)	Q <sub>p</sub> (TSF)
Fill	½ – 7 ½	6 – 26	14 – 19	N/A
Silty Clay	3 – 20	11 – 29	16 – 18	1.5 – 4.5

The native soils were visually classified as silty clay (CL) according to the Unified Soil Classification System (USCS).

The subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the appendix should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, penetration resistances, locations of the samples and laboratory test data as well as water level information. The stratifications shown on the boring logs represent the conditions only at the actual boring locations. Variations may occur, and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition between layers may be gradual. The samples, which were not altered by laboratory testing, will be retained for 60 days from the date of this report and then will be discarded.

#### Groundwater Conditions

Groundwater was observed to collect in boring B-4 at an approximate depth of 19 ½ feet below existing grade. However, fluctuations in the groundwater level should be anticipated throughout the year depending on variations in climatological conditions and other factors not apparent at the time the borings were performed. Additionally, discontinuous zones of perched water may exist within the soils. The possibility of groundwater level fluctuation should be considered when developing the design and construction plans for the project. Prior to construction, we recommend that the Contractor determine the actual groundwater levels at the site to determine if groundwater could have an adverse effect on proposed construction activities.

## EVALUATION AND RECOMMENDATIONS

### Preliminary Geotechnical Considerations

The following preliminary geotechnical-related recommendations have been developed on the basis of the subsurface conditions encountered at the time of drilling and PSI's understanding of the proposed development. Should changes in the project criteria occur, a review must be made by PSI to determine if modifications to our recommendations will be required.

The main preliminary geotechnical factor that may affect construction at this site is the presence of undocumented fill observed in the borings to depths ranging from about ½ to 7 ½ feet below existing grade. Where existing fill is encountered, PSI typically recommends that building foundations be planned to extend through the fill materials and be supported on the medium stiff to very stiff native silty clay soils. Based on the boring information, it is anticipated that these existing undocumented clayey fill soils should be suitable for support of floor slabs in the areas of B-1, B-2, B-4, and B-6. However, undocumented fill materials should be carefully evaluated by proof-rolling and density testing at the time of construction to document the in-place consistency of these materials to support the proposed floor slabs and pavements. The wood fragments found in the undocumented fill materials located in the area of B-3 and B-5 could cause additional settlement over time that can not be accounted for by proof rolling and are considered unsuitable to support floor slabs.

Deleterious materials, such as wood were encountered within the undocumented fill materials during the drilling operations in borings B-3 and B-5. Deleterious materials could include, but are not limited to, bricks, asphalt, concrete, metal, wood, or other building debris. Although deleterious materials were not encountered in the remaining borings, this does not eliminate the possibility that deleterious materials could be present within the undocumented fill materials at other locations on the site.

The primary risk of supporting buildings on undocumented/uncontrolled fill materials is the potential for excessive and/or non-uniform settlement. The non-uniformity concern is based on the lack of information regarding how the fill was originally placed. Without documentation, PSI cannot make an assessment as to whether or not the fill materials between the boring are consistent with what was explored. Risk of fill settlement can be reduced if the existing fill is removed and replaced with a controlled and compacted structural fill, or if records documenting the placement and compaction of the fill can be located. Although soft or loose fill materials were not encountered in the borings, this does not eliminate the possibility that soft or loose pockets or layers are present between and/or beyond the borings.

PSI has presented the geotechnical considerations with the understanding that the owner is willing to accept an elevated risk of floor slab settlement and utilize the existing fill as the support of slab on grade. PSI recommends a typical approach to site development and construction and provides a minimum level of fill mitigation. This includes typical observations proofrolling/proof-compacting of the floor slab and pavement areas, foundation excavation, and reworking of the unsuitable fill materials.



#### Preliminary Site Preparation & Fill Requirements

If site grading takes place prior to a final geotechnical report being reissued, PSI recommends that organic topsoil, frozen soil, vegetation, wood or other unsuitable material in the construction area be planned to be stripped from the site. Stripping operations should extend a minimum of 10 feet beyond the proposed building limits. PSI recommends that stripping operations be monitored and documented by a representative of the geotechnical engineer at the time of construction.

It should be planned that after stripping and excavating to the proposed subgrade level, as required, the building area should be proof-rolled with a loaded, tandem-axle dump truck or similar rubber-tired vehicle, loaded with at least 9 tons per axle. Proof-rolling aids in providing a firm base for compaction of fills, and helps to delineate soft, loose, or disturbed areas that may exist below subgrade level. Proof-rolling is especially important to help evaluate the surficial stability of existing fill soils that may be left in place below floor slabs. Soils which are observed to rut or deflect excessively (more than 1 inch) under the moving load should either be scarified and re-compacted with a sheepsfoot roller for cohesive soils, or undercut and replaced with properly compacted and documented structural fill. The proof-rolling and undercutting activities should be planned to be observed and documented by a representative of the geotechnical engineer and should be performed during a period of dry weather. In addition to proof-rolling, the subgrade soils should be scarified, moisture amended to be within 2% of the optimum moisture content, and compacted to at least 95 percent of the standard Proctor maximum dry density ASTM D 698 for a depth of at least 8 inches below the surface.

The undocumented fill soils encountered near the ground surface in the borings generally exhibited moderate blow counts and low to moderate moisture contents. Therefore, it appears these soils should be relatively stable during construction. However, clay subgrade soils can be easily disturbed by construction activities and are sensitive to moisture. Therefore, extra care should be used to avoid disturbing these soils during construction activities. If the soils become unstable during construction, or if near surface soft subgrade soils are encountered, it is recommended that coarse aggregate be placed on the subgrade until a stable base for compaction of fill is achieved. Typically, 12 to 24 inches of coarse aggregate are required, depending on the consistency of the subgrade. The coarse aggregate should consist of clean, crushed stone or gravel between  $\frac{1}{4}$  and 3 inches in size. The coarse aggregate should be spread in a maximum of 12-inch layers and consolidated with compaction equipment until it is "locked" in place.

Once the subgrade has been adequately stabilized, placement of new structural fill that is required to establish construction grades may begin. The first layer of fill material should be placed in a relatively uniform horizontal lift and adequately keyed into the subgrade soils. It should be planned that fill materials should have a Standard Proctor maximum dry density greater than 100 pcf, be free of organic or other deleterious materials, have a maximum particle size of 3 inches, and have a liquid limit less than 45 and plasticity index less than 25. Soils classified as CL, ML, SM, SC-SM, SW, and SP will generally be suitable for use as structural fill. Soils classified as OL, OH, MH, CH and PT should be considered unsuitable.

It should be planned that the fill placed be tested and documented by a geotechnical technician and directed by a geotechnical engineer to evaluate the placement of fill material. It should be noted that the geotechnical engineer of record can only certify the testing that is performed and the work observed by that engineer or staff in direct report to that engineer.

Structural fill should be planned to be placed in maximum lifts of 8 inches of loose material and should include areas within the building as well as areas to a distance of at least 5 feet outside the building perimeters. The degree of compaction can be reduced to 95 percent in parking area(s) and above the footing base elevation in the building area. Each lift of compacted, engineered fill should be tested and documented by a representative of the geotechnical engineer prior to placement of subsequent lifts. If a fine-grained silt or clay soil is used for fill, close moisture content control will be essential to achieve the recommended degree of compaction. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disk or scarifying.

If fill is placed prior to completing a final geotechnical report, PSI recommends that newly-placed, structural fill shall be evaluated in accordance with the following table:

MATERIAL TESTED	PROCTOR TYPE	MIN % DRY DENSITY	PLACEMENT MOISTURE CONTENT RANGE	FREQUENCY OF TESTING <sup>*2</sup>
Structural Fill (Cohesive)	Standard	98%	-2 to +2 %	1 per 2,500 yd <sup>2</sup> of fill placed
Structural Fill (Granular)	Standard	98%	-2 to +2 %	1 per 2,500 yd <sup>2</sup> of fill placed
Optional Structural Fill (Cohesionless)	Relative Density <sup>*1</sup>	75%	> 95% Saturation	1 per 2,500 yd <sup>2</sup> of fill placed
Random Fill (non load bearing)	Standard	95%	-3 to +3 %	1 per 5,000 yd <sup>2</sup> of fill placed
Utility Trench Backfill	Standard	95%	-2 to +2 %	1 per 50 LF of fill placed

<sup>\*1</sup>Relative Density as determined in general accordance with ASTM D4253 and D4254

<sup>\*2</sup>A minimum of one test per lift or as follows

The test frequency for the laboratory reference shall be one laboratory Proctor or Relative Density test for every 5 field density tests for the first 25 field tests and for every 10 field density tests thereafter for each material used on the site. If the borrow or source of fill material changes, a new reference moisture/density test should be performed.

After the first 5 reference moisture/density tests have been performed for the same material, a 1-point proctor test can be used at an interval of one for every 10 field density tests to extend the full reference test cycle to one for every 25 field density tests. One-point proctor tests must be

compacted within -2 and 0 % dry of the calculated optimum moisture content as based on the family of optimum determined from the first 5 reference moisture density tests.

Tested fill materials that do not achieve either the required dry density or moisture content range shall be recorded, the location noted, and reported to the Contractor and Owner. A re-test of that area should be performed after the Contractor performs remedial measures. The above test frequencies should be discussed with the contractor prior to starting the work. Changes in the frequency and testing can be allowed based upon actual site conditions and review by the geotechnical engineer of record. Changes should be documented prior to their implementation.

#### Preliminary Foundation Recommendations

The proposed structure can be preliminarily supported on shallow, spread footing foundations. As discussed previously, PSI recommends that foundations extend through the fill materials and be supported on the medium stiff to very stiff native silty clay soils, or compacted structural fill. Column and strip footings bearing on these soils can be preliminarily designed for a maximum net allowable soil bearing pressures ranging from of 3,500 to 4,000 psf and 3,000 to 3,500 psf, respectively based on dead load plus design live load. The net pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.

Exterior footings should be planned to be located at a depth of at least 3 ½ feet below the outside final exterior grades to provide adequate frost protection. If the building is constructed during winter months or if the footings will likely be subjected to freezing temperatures after construction is completed, then all footings should be protected from freezing. Interior footings should be founded at least 2 feet below the final floor slab level for proper confinement of the bearing soils.

PSI recommends that the planning and budgeting for this project include soils at footing design elevation being observed, tested, and documented by a representative of PSI prior to concrete placement to evaluate the suitability and uniformity of the bearing soils for support of the design foundation loads. The remedial procedures described in the following paragraph can be used to ascertain the typical methodologies required to provide suitable foundation support where unsuitable material such as soft or loose soils, existing fill, or organic soils are encountered.

For planning purposes, if unsuitable bearing soils are encountered in a footing excavation, the footing will need to be deepened to competent bearing soil and the footing could be lowered, or an overexcavation and backfill procedure could be performed. If an overexcavation and backfill procedure is utilized, it would require widening the deepened excavation in all directions at least 8 inches beyond the edges of the footing for each 12 inches of overexcavation depth (See "Overexcavation and Backfill Procedure" diagram in the Appendix). The overexcavation should then be backfilled in a maximum of 8-inches thick loose lifts with suitable granular fill material, such as IDOT Gradation CA-7 or CA-6, compacted to at least 98 percent of the maximum Standard Proctor dry density (ASTM D 698). Another alternative is to undercut and refill the unsuitable area with flowable mortar up to the design elevation of the footings. The flowable

mortar would serve as a protection to the subgrade during construction of the foundations.

Based on the known subsurface conditions, limited preliminary laboratory testing, and past experience, PSI anticipates that properly designed and constructed footings supported on the recommended, inspected and approved natural soils, or properly compacted structural fill should experience maximum total and differential settlements between adjacent columns of less than 1 inch and ¼ inches, respectively for the loadings described in this report. If loading changes, there will be a need to re-assess the settlements.

#### Preliminary Floor Slab Recommendations

From the results of PSI's exploration program, the floor slab can be planned to be grade supported on existing fill soils that have been proofrolled and documented by the geotechnical engineer, or inspected and approved newly placed, properly compacted structural fill which extends to natural soils as described herein. As stated above the undocumented fill materials in the areas of borings B-3 and B-5 contained wood fragments and are not suitable to support floor slabs. Floor slab subgrade preparation should be in accordance with the recommendations outlined in the Site Preparation & Fill Requirements section of this report.

For the subgrade, prepared as recommended, and properly compacted fill, a modulus of subgrade reaction,  $k$  value, of 140 pounds per cubic inch (pci) may be used in the grade slab design based on a 1 ft. x 1 ft. plate load test. However, depending on how the slab load is applied, the value will have to be geometrically modified. The value should be adjusted for larger areas using the following expression for cohesive and cohesionless soil:

Modulus of Subgrade Reaction,  $k_s = \left(\frac{k}{B}\right)$  for cohesive soil and

$$k_s = k \left(\frac{B+1}{2B}\right)^2 \text{ for cohesionless soil}$$

where:  $k_s$  = coefficient of vertical subgrade reaction for loaded area,  
 $k$  = coefficient of vertical subgrade reaction for 1x1 square foot area, and  
 $B$  = width of area loaded, in feet

The precautions listed below should be followed for construction of slab-on-grade pads. These details will not reduce the amount of movement, but are intended to reduce potential damage should some settlement of the supporting subgrade take place. Some increase in moisture content is inevitable as a result of development and associated landscaping. However, extreme moisture content increases can be largely controlled by proper and responsible site drainage, building maintenance and irrigation practices.

- Cracking of slab-on-grade concrete is normal and should be expected. Cracking can occur not only as a result of heaving or compression of the supporting soil and/or bedrock material, but also as a result of concrete curing stresses. The occurrence of concrete shrinkage crack, and problems associated with concrete curing may be reduced and/or controlled by limiting

the slump of the concrete, proper concrete placement, finishing, and curing, and by the placement of crack control joints at frequent intervals, particularly where re-entrant slab corners occur. The American Concrete Institute (ACI) recommends a maximum panel size (in feet) equal to approximately three times the thickness of the slab (in inches) in both directions.

For example, joints are recommended at a maximum spacing of twelve (12) feet based on having a four-inch slab. PSI also recommends that the slab be independent of the foundation walls. Using fiber reinforcement in the concrete can also control shrinkage cracking.

- Areas supporting slabs should be properly moisture conditioned and compacted. Backfill in all interior and exterior water and sewer line trenches should be carefully compacted to reduce the shear stress in the concrete extending over these areas.

Exterior slabs should be isolated from the building. These slabs should be reinforced to function as independent units. Movement of these slabs should not be transmitted to the building foundation or superstructure.

PSI recommends that a minimum 4-inch thick, free-draining granular mat be placed beneath the floor slab to enhance drainage. The floor slabs should have an adequate number of joints to reduce cracking resulting from differential movement and shrinkage. Floor slabs should not be rigidly connected to columns, walls, or foundations.

A vapor retarder should be considered in areas of tile, carpet, or other moisture sensitive floor finishes. Appropriate curing procedures should be followed to reduce the risk of slab "curling" if a vapor retarder is used.

#### RECOMMENDATIONS FOR THE FINAL GEOTECHNICAL INVESTIGATION

Based on the preliminary geotechnical investigation of this site, it is PSI's opinion that the following information should be supplied by the designer to prepare a more comprehensive final geotechnical investigation of the proposed site and should be prepared prior to being constructed.

- Detailed location of the structures
- Grading plan with floor slab elevations
- Structural loads on the walls and columns
- Locations of critical structures such as elevator pits, sumps, stairwells, basements, loading docks, etc.
- Documentation of known structural fill placed on the site (if fill is placed before the final geotechnical report is prepared)

Based on the information obtained from PSI's preliminary investigation, it is our opinion that the final geotechnical investigation should include:

- Additional borings should be performed in the building and parking areas to depths consistent with the preliminary geotechnical investigation. The final geotechnical report should be based on at least four (4) borings being within the proposed building foot print



### PRELIMINARY CONSTRUCTION PLANNING CONSIDERATIONS

It is recommended that PSI be retained to provide observation and testing of construction activities involved in the foundation, earthwork, and related activities of this project. PSI cannot accept any responsibility for any conditions that deviate from those described in this report. Nor can PSI accept responsibility for the performance of the foundation if not also engaged to provide construction observation and testing for this project.

#### Preliminary Drainage and Groundwater Considerations

Water should not be allowed to collect in the foundation excavations, on floor slab areas, or on prepared subgrades of the construction area during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, groundwater or surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of the buildings and beneath the floor slabs. Grades should be sloped away from the buildings and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill and floor slab areas.

Groundwater was observed to collect in boring B-4 during the drilling operations at an approximate depth of 19 ½ feet below existing grade. It is possible that seasonal variations may cause water level fluctuations or the presence of a water table in the upper soils at the time of construction. Where water is encountered at shallow depths, pumping from sumps or the use of perimeter trenches to collect and discharge the water away from the work area should be used. Should excessive and uncontrolled amounts of seepage occur, the geotechnical engineer should be consulted.

#### Federal Excavation Regulations

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better insure the safety of workmen entering trenches or excavations. This federal regulation mandates that all excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person," as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety

regulations. PSI is providing this information solely as a service to our client. PSI is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

### GEOTECHNICAL RISK

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools that geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free, and more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations, presented in the preceding section, constitute PSI's professional estimate of the necessary measures for the proposed structure to perform according to the proposed design based on the information generated and reference during this evaluation, and PSI's experience in working with these conditions.

### REPORT LIMITATIONS

The recommendations submitted are based on the available subsurface information obtained by PSI and design details furnished by Partners in Development, USA, LLC for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation recommendations are required. If PSI is not retained to perform these functions, PSI will not be responsible for the impact of those conditions on the project.

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are more complete, the geotechnical engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At this time, it may be necessary to submit supplementary recommendations. This report has been prepared for the exclusive use of Partners in Development, USA, LL and their consultants for the specific application to the proposed Lot 2 Oakhurst property in Aurora, Illinois.

APPENDIX

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